

*Editorial***Recent advances in incisional hernia treatment**

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Incisional hernias are still a frequent complication following abdominal surgery. They occur in 2 to 11% of all laparotomies [Mudge 1985, Pollock 1989]. According to the literature [Georges 1986, Van der Linden 1988, Hesselink 1993], in case of large incisional hernias (more than 10 cm in diameter), a simple suture or an autoplasty have a recurrence rate of 20 to 54%. This recurrence rate increases with the size and the diameter of the muscular defect and in cases of obesity [Luijendijk 1997].

After Bourgeon (1960-1972), Usher (1963), Rives (1973) and Notaras (1974), the «G.R.E.P.A.» group, founded in 1979 by a Research Group of French Surgeons at the foundation of the European Hernia Society, decided to evaluate various techniques using the insertion of meshes in the treatment of hernias and incisional hernias [Stoppa 1979, Chevrel 1990, Flament 1999, Rives 1985, Alexandre 1986]. At that time, the material used was a polyester mesh (Mersilene). In other countries, like in the United States, some surgeons [Wantz 1991] started to use polypropylene (Marlex, Prolene).

The required qualities of synthetic material have been well established by Scales (1953). It should be physically unmodified by tissue fluid, clinically inert and non-carcinogenic. It should

also produce no or little inflammatory or foreign body-reaction, no allergy and no hypersensitivity. Finally it should be able to resist mechanical strains, to be cut in the form required and to be sterilized. Since the beginning, many new materials have been manufactured, evaluated [Chevrel and Rath 1996, Amid 1997] and used by many surgeons: e.g., ePTFE, other polyester material such as Parietex®, polypropylene (Surgipro®, Vypro®, Atrium®) and finally composites by combination of polypropylene or polyester with ePTFE or absorbable hydrogel in order to avoid adhesions between viscera and the prosthesis.

These surgeons have chosen their favorite prosthesis position:

1) For the majority of them, the favorite position is the prefascial retro-muscular site. In our personal experience for example, for 435 large incisional hernia repairs, the recurrence rate using this procedure has been 4.7% (maximal bias corrected) with a follow-up higher than 15 years. For Flament, with about 474 patients treated using a similar technique, the recurrence rate was 5.6%.

2) Some surgeons like Kennedy, Liakatos, and Küng preferred the pre-muscular prosthetic repair.

Chevrel recently reported a 4.5% recurrence rate for 440 such procedures.

3) The intraperitoneal approach is sometime the only choice as in the new laparoscopic technique [Park, et al 1998]. For many surgeons and for ourselves, inserting a mesh behind the peritoneum is preferred in case of multiple previous operations or a bad-quality wall. For others, it is an initial deliberate choice: Arnaud, Balique, Mathonnet, Drouard, Oussoultzoglou, Gonzales and Gillion used this procedure with a low recurrence rate: 2.6 to 8%.

In case of intraperitoneal mesh position, the most important goal is to avoid an excessive aggressivity of the prosthesis against the intestine (leading to adhesions, occlusions, and fistulas) and to obtain a good result in terms of quality of the abdominal wall repair.

After an exclusive use of ePTFE in intraperitoneal mesh position, because of its properties, a new generation of prostheses has been developed and should be evaluated (Parietex Composite®, Bard Composix® and others).

During this meeting, the authors will give their recent advances and results concerning these new meshes.

The extensive study over roughly 30 years of prosthetic repair, which represents the best procedure for the repair

of large incisional hernias, allows us to come to conclusions about its excellent results in terms of wall-repair quality (low recurrence rates - 6% - after a long follow-up), morbidity rate (6 to 13%) and mortality rate (1 to 2%).

No case of induced carcinoma complication has been recorded by the best surgeons nor has it been described in

scientific publications [Klosterhalfen and Klinge 1999]. Prosthetic ruptures or migrations are very rare and often due to mistaken indication for the type of prosthesis or to a poor technique.

As Chairman, I am proud to open this meeting, and hope that, due to the exceptional quality and the wide experience of the authors, numerous impor-

tant changes and advances in incisional hernia surgery will be presented.

I would like to thank Pr Hidalgo Pascual for having agreed to include this specific meeting among the academic sessions of the exhaustive and excellent program of the XXI International Congress of the European Hernia Society.

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